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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,152

10/07/2005

Takayasu Taniguchi

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12/28/2009

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

HAND, MELANIE JO

ART UNIT

PAPER NUMBER

3761

NOTIFICATION DATE

DELIVERY MODE

12/28/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

Office Action Summary	Application No. 10/552,152	Applicant(s) TANIGUCHI ET AL.	
	Examiner MELANIE J. HAND	Art Unit 3761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 30, 2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection prompted by applicant's amendment to the claims.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. Claims 1, 2 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niki et al (JP 2003-052746 A) in view of Keyes et al (U.S. Patent No. 4,200,238).

With respect to **claim 1**: Niki discloses a water-absorbing resin compound, which comprises a water- absorbing resin, wherein the water-absorbing resin consists of a polyacrylate salt, i.e. a cross-linked polymer of an acrylic acid salt; an antibacterial agent comprising a porous material incorporating an antibacterial metal, and a metal chelating agent, wherein said metal chelating agent comprises powder particles which are outside of the porous material inasmuch as Niki discloses EDTA as an example, which one of ordinary skill in the art would readily understand to be in powder (particulate) form.

Niki does not disclose a particle size distribution for the chelating agent powder. Keyes discloses an EDTA disodium salt particulate powder wherein the particulate passes through a 140 mesh US sieve, which indicates a particulate having an average particle size of less than 105 microns. Keyes discloses that the particulate is rapidly soluble and easily handled by machinery. Therefore it would be obvious to one of ordinary skill in the art to modify the article of Miki such that more than 50% of the particles, which overlaps the claim limitation "wherein 80% by weight or more of the powder particles have a particle diameter of 100 μm or less".

With respect to **claim 2**: The content of the antibacterial agent disclosed by Niki is 0.005 – 2 parts by weight with respect to 100 parts by weight of water-absorbing resin, which overlaps the claimed range of 0.001-1 parts by weight with respect to 100 parts by weight of the water-absorbing resin. Niki discloses this with respect to an embodiment in which the superabsorbent is carboxymethylcellulose and therefore does not disclose this weight fraction for the antibacterial in the embodiment with polyacrylate salt. However Niki discloses that this amount ensures sufficient antibacterial effect. Therefore it would be obvious to one of ordinary skill in

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the art to modify the resin of Niki such that a single embodiment comprises a resin consisting of polyacrylate salt and antibacterial metal in the amount disclosed for the CMC superabsorbent with a reasonable expectation of success to ensure sufficient antibacterial effect.

With respect to **claims 5,6**: The metal chelating agent disclosed by Niki is an aminocarboxylic acid metal chelating agent, specifically EDTA.

With respect to **claim 7**: Niki discloses an absorbing material, absorber 4, which comprises a water-absorbing resin compound and a hydrophilic fiber, namely pulp fiber. Niki does not disclose an absorbing material according to any one of claims 1 to 6 because Niki does not disclose a particle size distribution for the metal chelating agent. Keyes discloses an EDTA disodium salt particulate powder wherein the particulate passes through a 140 mesh US sieve, which indicates a particulate having an average particle size of less than 105 microns. The motivation to modify the article of Niki such that the chelating agent has the particle distribution disclosed by Keyes is stated *supra* with respect to claim 1.

With respect to **claim 8**: Niki discloses an absorbing product, which comprises a liquid-permeable sheet, top sheet 2; a liquid- non-permeable sheet, backseat 3; and an absorbing material, absorber 4, comprising a water-absorbing resin compound and a hydrophilic fiber, cellulose pulp fiber, wherein the absorbing material 4 lies between the liquid-permeable sheet 2 and the liquid-non-permeable sheet 3.

Niki does not disclose an absorbing material according to any one of claims 1 to 6 because Niki does not disclose a particle size distribution for the metal chelating agent. Keyes discloses an EDTA disodium salt particulate powder wherein the particulate passes through a

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140 mesh US sieve, which indicates a particulate having an average particle size of less than 105 microns. The motivation to modify the article of Niki such that the chelating agent has the particle distribution disclosed by Keyes is stated *supra* with respect to claim 1.

With respect to **claim 9**: The antibacterial agent is an eluting-type inasmuch as Niki discloses it reveals its effect “only after contact with urine”.

With respect to **claim 10**: Niki discloses a water-absorbing resin compound further comprising a complex formed of the metal chelating agent, EDTA, and the anti-bacterial metal.

Niki does not disclose an absorbing material according to any one of claims 1 to 6 because Niki does not disclose a particle size distribution for the metal chelating agent. Keyes discloses an EDTA disodium salt particulate powder wherein the particulate passes through a 140 mesh US sieve, which indicates a particulate having an average particle size of less than 105 microns. The motivation to modify the article of Niki such that the chelating agent has the particle distribution disclosed by Keyes is stated *supra* with respect to claim 1.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Niki ('746) in view of Keyes as applied to claim 1 above and further in view of Gancet et al ('772).

With respect to **claim 3**: Niki does not disclose an amount of antibacterial metal with respect to the porous material. Keyes does not remedy this deficiency. The content of the antibacterial metal incorporated in antibacterial agent disclosed by Gancet is 0.01-10%, which overlaps the claimed range of 0.1-15 parts by weight with respect to 100 parts by weight of the porous material. (Col. 3, lines 4-7) Gancet discloses a water absorbing resin compound comprising a water absorbing resin that consist of a crosslinked polyacrylic acid salt ('772, Col. 2, lines 4-9) in

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powder form and an antibacterial agent having a porous material incorporating an antibacterial metal in the form of a zeolite powder with silver metal ions incorporated therein and mixed with the resin powder. The silver metal ion disclosed by Gancet is identical to a metal disclosed by applicant for the recited antibacterial metal and therefore meets the limitation of an antibacterial metal. Since Gancet discloses the same resin material and Niki discloses a zeolite containing silver as one of the suitable antibacterial metals and the resin of Gancet performs the same function as that of Niki, it would be obvious to one of ordinary skill in the art to modify the resin of Niki such that the amount of antibacterial metal is that disclosed by Gancet with a reasonable expectation of success to provide a resin with antibacterial benefit.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Niki ('746) in view of Keyes et al ('238) and further in view of Hosokawa (EP 257,951 A2).

With respect to **claim 4**: Niki does not disclose an amount of antibacterial metal with respect to the porous material. Keyes does not remedy this deficiency. Hosokawa discloses that in the resin composition, the content of the metal chelating agent is 0.01-10 parts by weight with respect to 100 parts by weight of the water-absorbing resin. ('951, Page 2, lines 29-31) Since the absorbing component of the resin of Hosokawa is substantially identical in composition to that of Niki (i.e. polymer of acrylic acid) and Hosokawa discloses that the addition of the chelating agent to the absorbing resin improves water absorbing performance and aging stability of the absorbing polymer, it would be obvious to one of ordinary skill in the art to modify the resin compound of Niki such that the amount of chelating agent present is the amount disclosed by Hosokawa with a reasonable expectation of success.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELANIE J. HAND whose telephone number is (571)272-6464. The examiner can normally be reached on Mon-Thurs 8:00-5:30, alternate Fridays 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Melanie J Hand/
Primary Examiner, Art Unit 3761